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FOREIGN DOCUMENTS OR RADIO BROADCASTS

REPORT

CD NO.

50X1-HUM

COUNTRY USSR  
SUBJECT Economic - Automobile industry  
HOW PUBLISHED Monthly periodical  
WHERE PUBLISHED Moscow  
DATE PUBLISHED Aug 1949  
LANGUAGE Russian

DATE OF INFORMATION 1949

DATE DIST. 7 Nov 1949

NO. OF PAGES 2

SUPPLEMENT TO  
REPORT NO.

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SOURCE Avtomobil'naya promyshlennost', No 8, 1949.

METAL CONSUMPTION HIT;  
ELECTRIC TRUCKS DESCRIBED

**LOWER METAL CONSUMPTION NECESSARY**

Some designers do not take into consideration the need for lower metal consumption in their new products. While the conversion at the Moscow Auto Plant imeni Stalin from production of the ZIS-5 to the superior ZIS-150 was brilliantly executed, the decrease in the coefficient of cold-rolled sheet utilization from 0.67 to 0.52 was inexcusable.

The Vladimir Tractor Plant is another offender. Its 1948 rolled stock consumption was 16 percent higher than calculated.

Rejects are another serious source of metal squandering. Despite the general decrease in number of rejects during the first quarter of the year, some enterprises of the Main Administration for Bearing Manufacture are wasting more metal than ever through excessive rejects. Rejects in casting blocks for tractor engines now stand at 15 - 16 percent.

**VACUUM CASTING OF ENGINE BLOCKS**

Experiments have been conducted on a new method of vacuum casting. Forced suction of gases from cores and molds has a positive effect on the casting process. The new method, which is extremely simple under any industrial conditions, makes it possible to use core mixture bonds having high gas-producing qualities.

Vacuum casting must be popularized and introduced into industry in every way possible.

Orgavtoprom is now working on the introduction of vacuum casting of heads for tractor engine blocks at the Vladimir Tractor Plant and cylinder blocks at the GAZ imeni Molotov.

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**ELECTRIC TRUCKS OKAYED FOR CITY TRANSPORT**

Tests of experimental models of the NAMI-750 and NAMI-751 showed that these electric trucks satisfactorily meet the needs of USSR city transport.

The NAMI-750 electric truck has a load capacity of 0.5 tons and the NAMI-751, a load capacity of 1.5 tons. The weight of the entire NAMI-750 frame is 90 kilograms; of the NAMI-751, 110 kilograms.

Special lead-acid-type storage batteries, assembled from coated plates, have been developed for the NAMI electric trucks. They have three separators; glass fiber, vinyl chloride, and plywood. The containers are of ebonite. Each battery is assembled in two sections and consists of 40 elements in the NAMI-750 and 42 elements in the NAMI-751. For winter operation, installation of an auxiliary battery in a special insulated container is provided to protect the electrolyte from cooling and prevent loss of capacity by the storage batteries.

The capacity of the NAMI-750 battery is 200 ampere hours, 80 volts; in the NAMI-751, capacity is 300 ampere hours, 84 volts.

The NAMI-750 electric motor has a 2.95-kilowatt capacity at 2,100 rpm; the NAMI-751, 5 kilowatts at 1,660 rpm.

	<u>NAMI-750</u>	<u>NAMI-751</u>
Type of Body	Van	Van
Dimensions (mm)		
Length	4,040	4,460
Width	1,620	1,930
Height (loaded)	1,850	2,000
Loading (pogruzochaya) height (mm)	870	1,000
Base (mm)	2,050	2,500
Wheelbase (kolesya) (mm)	1,300	1,450
Turning radius (m)	5	6
Weight (kg)	1,766	2,639
Chassis (% of total)	41.3	38.3
Body (% of total)	20.0	20.0
Storage battery (% of total)	38.7	41.7
Total working weight (kg)	2,416	4,269
Maximum speed (km/hr)	33	36
Maximum gradient (%)	12	12
Distance on one battery charge (km)	55	70
Consumption of electric energy (kwt-hr/ton-km)	102	92

The average rate of acceleration to a speed of 25 kilometers per hour of the NAMI-750 with load, is 0.25 meters per second per second; to a speed of 20 kilometers per hour, 0.465 meters per second per second; and to 15 kilometers per hour, 0.76 meters per second per second. The rate of acceleration of the NAMI-751 is 0.205, 0.4, and 0.56 meters per second per second, respectively. Thus, the pickup of the NAMI is approximately double that of foreign models.

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